

Wages in State Rebounded in Go-Go '90s

After Weakness in Previous Decade, Several Major Industries Grew Faster Than U.S. Counterpart

When Arizona economists look back on the 1990s, they'll note several major events: 1) the state's economy became more diversified, with the four C's (copper, cotton, citrus, and cattle) only a memory from the past; 2) high-tech manufacturing grew to become the state's dominant industry; and perhaps most importantly, 3) the hemorrhaging of wages that began in the mid-80s was plugged, as the state

began to see respectable wage growth in several major industry groups.

Between 1980 and '89, the U.S. average annual wage outgrew the Arizona counterpart in seven out of nine years and overall, 57.5 percent vs. 50.7 percent. In addition, Arizona's wages grew slower than the nation's in almost every major industry group.

As pointed out in a Research Administration newsletter, some of the reasons for the wage weakness were: a continued higher share of service-producing jobs in Arizona than the nation as a whole; a 50 percent drop in mining employment in the early '80s and a 30 percent drop in construction jobs in the late '80s; a sluggish manufacturing sector in the late '80s that only had growth in lower-paying nondurable-goods industries; and a rapidly expanding part-time workforce, which grew 3½



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times faster than the nation's in the late '80s.¹

Although growth in average annual pay in Arizona sputtered in the early 1990s — still reeling from the effects

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Jobless Rate Fell to 30-Year Low in 2000

Note: This will be the last Quarterly Review published in Arizona Economic Trends. Beginning with the first quarter of 2001, Quarterly Review will only appear on DES, Research Administration's Internet site at the following address: <http://www.de.state.az.us/links/economic/webpage/page7.html>.

ARIZONA'S WORKFORCE — 2000 QUARTERLY REVIEW

The economic expansion in Arizona that began in the early 1990s continued into the year 2000; but at a slower pace in comparison to recent years. Even though the economy grew at a slower rate in the year 2000, the strong job market absorbed a greater fraction of the state's workforce causing the number of unemployed to drop. Since the demand for labor rose faster than the supply, the unemployment rate fell to a level that has not been seen since the late 1960s. The number of employed and nonfarm jobs reached a

(continued on page 16)

of the savings and loan debacle — by the end of the decade, wages in several major industry groups — manufacturing, wholesale trade, retail trade, and construction — had more than outpaced the rest of the nation. In fact, overall wage growth in Arizona was slightly faster than the U.S. (42.3 percent vs. 41.1 percent), which was good enough to reverse about one-third of the damage of the 1980s, when the ranking for Arizona's overall average wage fell about 10 places to about 30th nationally.²

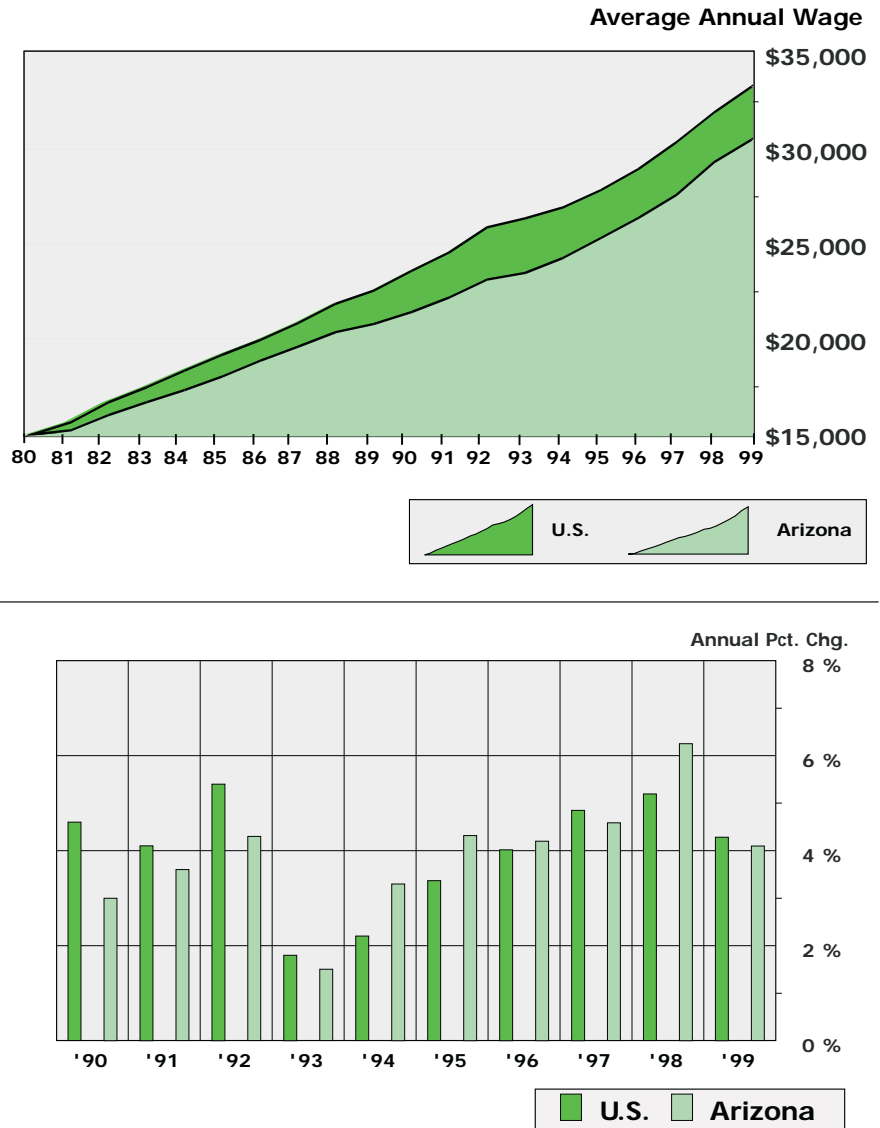
Still, it's difficult for Arizona's overall wage to outdistance the nation's because of the continued dominance of lower-paying services and retail trade sectors, which had employment growth of 31.5 and 18.6 percent, respectively, during the '90s. U.S. employment growth in these sectors was 30.3 percent and 17.7 percent, respectively.

So what accounted for the turnaround during the recent decade, and in a state noted for attracting low-wage businesses? Here are a few of the reasons:

- Overall Arizona payroll employment grew 45.7 percent vs. 17.7 percent for nation, with labor shortages reported in a number of sectors;
- The higher-paying goods-producing sectors' share of Arizona's overall nonfarm payroll employment remained fairly stable, while the goods-producing sectors' share of U.S. employment fell about 25 percent. In the '90s, the rate of employment growth in service-producing sectors slowed in Arizona to an annual rate of 4.8 percent versus 5.8 percent during the '80s. Service-producing jobs grew 48.3 percent between '90 and '99, while goods-producing jobs grew 34.6 percent, or nearly 4 percent a year, compared to a weak 11.3 percent during the '80s, or 1.3 percent a year.
- Arizona manufacturing employ-

Figure 1

U.S. vs. Arizona Average Annual Wage, 1980-'99, and Annual Percentage Change, 1990-'99



Source U.S. Department of Labor, Bureau of Labor Statistics, November 2000

- ment grew 14.1 percent versus a U.S. decline of 3.1 percent, with most of the state's gain coming in the higher-paying durable-goods sectors;
- Arizona construction employment more than tripled compared to a 25 percent U.S. gain, with the state experiencing extreme shortages in many occupations;
- Spurred by the state's proximity

- to California and Mexico, cheaper land, and lower payroll costs, Arizona wholesale trade employment grew nearly 50 percent over the decade, four times as fast as nationally;
- Employment in a population-driven retail trade sector grew about 2½ times as fast as nationally — 37.3 percent vs. 16.3 percent. The part-time na-

ture of retail trade probably pulled down overall Arizona wage growth, but a shortage of low-wage workers that contributed to higher wages for that group likely mitigated some of the effects of part-time workers in retail trade;

- Arizona services employment grew about twice as fast as the nation's — 69.8 percent vs. 39.8 percent, with higher-paying business services and health services sectors providing much of the gain.

Although there were many more positives than negatives during the decade, there were a number of areas of concern regarding wage growth. Among these were:

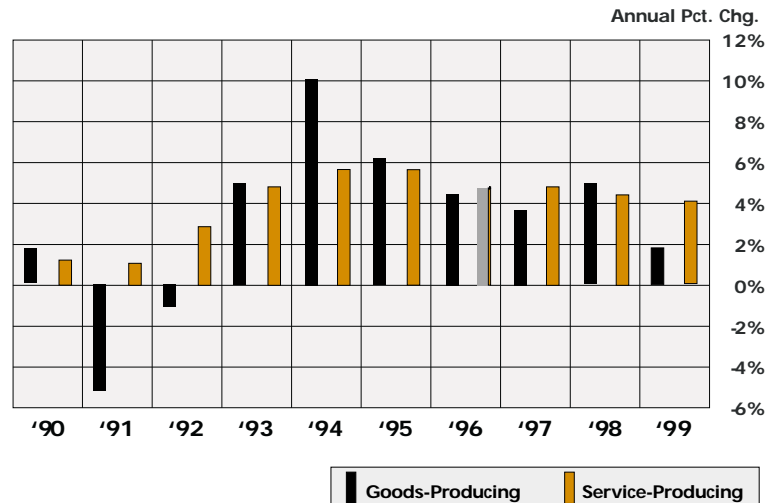
- A wage gap between Arizona and the nation in the FIRE (Finance Insurance and Real Estate) division widened significantly (to about 15 percent), due partially to weakness in state banking pay;
- Despite more than three times greater employment growth, government wages grew only slightly faster than the nation (Some may consider that a good thing.);
- Arizona construction wages, which grew somewhat faster than the nation's (39 percent vs. 33 percent), still had less-than-stellar wage growth in certain sectors where employment growth was three- to seven-times faster than the nation's.

Goods-Producing vs. Service-Producing Jobs

Arizona's goods-producing industries' share of overall employment continued to decline during the 90s — from 18.9 percent to 17.5 percent — but the drop was less steep than during the '80s, when the goods-producing sectors' share of overall employment fell from a high of 25 percent at the beginning of the de-

Figure 2

Arizona Goods-Producing vs. Service-Producing Employment and Annual Percentage Change, 1990-99



Source U.S. Department of Labor, Bureau of Labor Statistics, November 2000

cade. The nation's goods-producing sectors' share of payroll employment in the '90s shrank three percentage points from 22.8 percent to 19.8 percent.

The ratio of growth of goods- versus service-producing jobs in Arizona compared to the nation during the '90s was quite stark. For every four service-producing jobs created in Arizona, three goods-producing jobs

were created. In the U.S., the ratio was 10 to 1.

Manufacturing

One of the state's stellar performers during the 1990s was manufacturing, led by the high-tech sectors. Between 1994 and '99, manufacturing wages increased 28.6 percent, or slightly under 6 percent a year. The average wage in manufacturing in '99

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Table 1

Arizona, U.S. Durable Goods and Nondurable Goods Manufacturing Employment and Share of Overall Manufacturing Employment, 1990, 1999

Arizona (Emp. In Thousands)			
	1990		1999
Durable	140.0 (75.5%)		162.7 (77.0%)
Nondurable	45.4 (24.5%)		48.7 (23.0%)

U.S. (Emp. in Thousands)			
	1990		1999
Durable	11,109 (58.2%)		11,103 (59.9%)
Nondurable	7,968 (41.8%)		7,440 (40.1%)

was \$44,198, ranking Arizona 10th among all states and Washington D.C. And whereas manufacturing wages in the state were \$600 better than in the nation in 1993 (\$33,055 vs. \$32,405), by 1999 Arizona enjoyed a better than \$2,000 advantage over the rest of the country (see Figure 3).

One of the important drivers of the high-tech industry wage gains during this period was the semiconductor sector, which made up nearly half of high-tech's employment and about one-fifth of manufacturing's overall employment. Between 1993 and 1998, average annual wages in the semiconductor sector grew at gigahertz speeds (see Figure 4), increasing 50 percent to \$69,520, while employment grew 31 percent to a level of 36,700. But a 9 percent drop in semiconductor employment in '99 and moderately weak wage growth (1.8 percent) were instrumental in moderating high-tech's and manufacturing's wage gains that year.

Manufacturing wages rose from about \$29,000 in 1990 to slightly under \$44,200 in '99, a 52 percent jump. As was the case with most major industries in Arizona, most of the wage growth occurred in the mid- to late-'90s, with a small retrenchment in

Figure 3

Arizona vs. U.S. Annual Average Manufacturing Wage, 1990-99

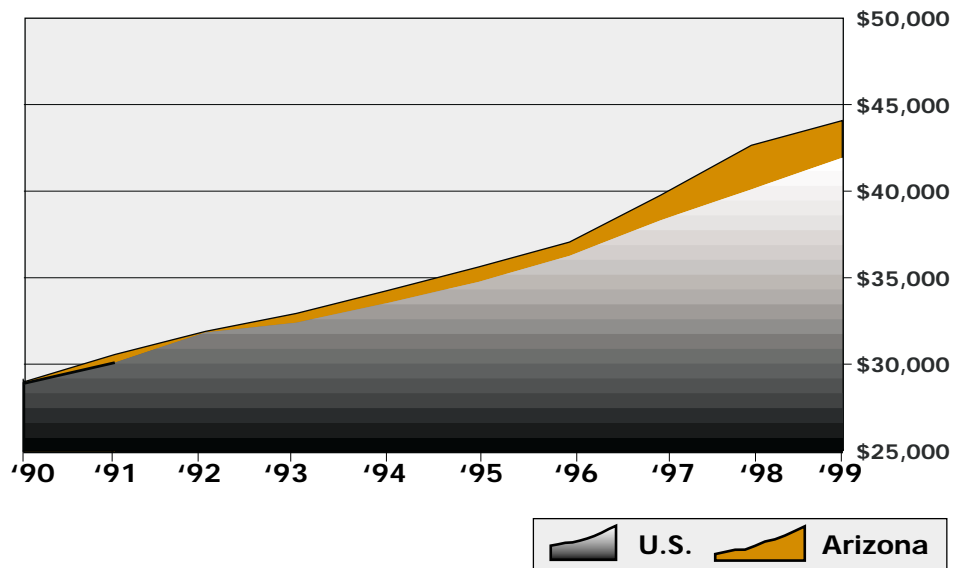
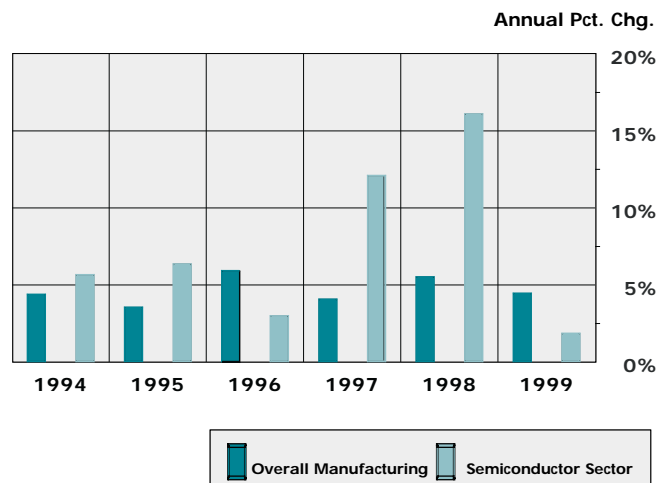


Figure 4

Annual Percentage Change in Arizona Overall Manufacturing and Semiconductor Sector Wages, 1994-'99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

'99 (-2.1 percent). Between '90 and '93, wages rose 13.6 percent, or 4.5 percent a year, as overall industry employment fell nearly 5 percent, but nondurable-goods employment rose 1.8 percent. Between '93 and '98, wages rose 29.4 percent, or 5.9 per-

cent annually, as overall manufacturing employment rose 22.4 percent, led by a 27 percent rise in the higher-paying durable-goods sectors. In '99, there was weakness in both durable (-1.6 percent) and nondurable goods (-3.6 percent) employment and wages.

Despite overall employment gains in manufacturing during the '90s, the industry's share of overall employment in Arizona continued to decline during the decade, so its effect on overall wages was somewhat muted. In 1980, manufacturing made up 15.2 percent of overall wage and salary employment, but that fell to 12.5 percent in 1990 and to slightly under 10 percent in 1999. So, despite gains in all areas of manufacturing, the overall trend in Arizona (and the nation) is toward a service economy.

Another key change between the '80s and '90s was that durable-goods manufacturing grew twice as fast as nondurable-goods manufacturing the past decade — 16.2 percent vs. 7.3 percent — reversing a trend in the '80s when growth was just the opposite (see Table 1). In the U.S., durable-goods manufacturing was unchanged during the '90s, while nondurable-goods manufacturing fell 6.6 percent. The surge in durable-goods manufacturing in Arizona would account for the state's growth in manufacturing wages during the '90s — 52 percent between 90 and 99, or 5.8 annually.

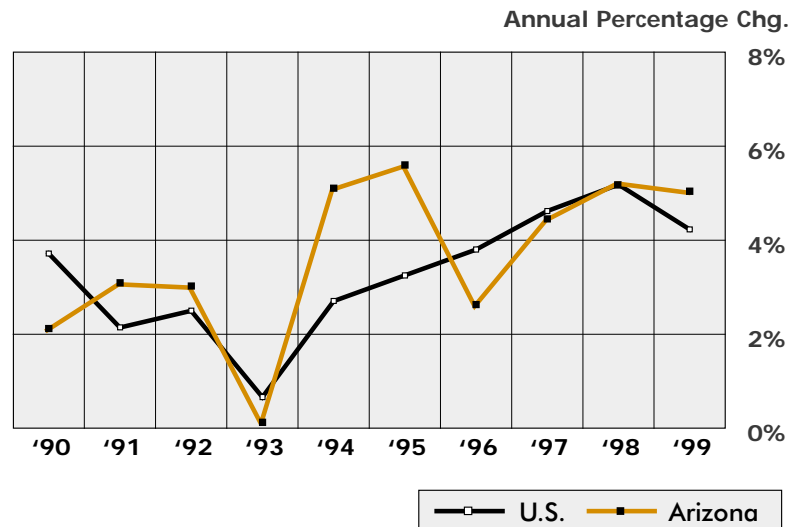
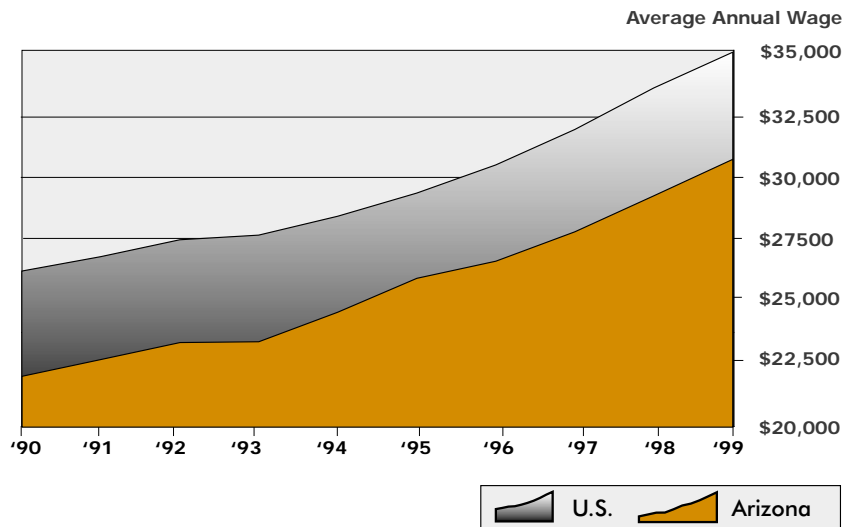
The drop in U.S. nondurable-goods manufacturing during the '90s kept the nation's manufacturing wage stronger than might be expected, given the overall weakness of manufacturing employment nationally. U.S. manufacturing wages grew 45.1 percent, or 5 percent annually, during the decade. Enactment of the NAFTA treaty in the early '90s likely accelerated the departure of nondurable-goods jobs in areas such as textiles, where U.S. employment fell nearly 20 percent over the decade.

Construction

Despite employment growth more than three times as fast as the nation at-large and reports of severe worker shortages, Arizona construction wages continued to lag considerably behind the U.S. average by the end of the decade. Still, Arizona narrowed the deficit in construction pay by more than

Figure 5

Arizona vs. U.S. Construction Wages and Annual Percentage Change, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

one-quarter during the nine-year period — from 15.6 percent to 11.3 percent.

Arizona construction employment grew a staggering 87 percent between 1990 and '99, more than three times the U.S. construction employment gain, while wages increased 40 percent, or 4½ percent annually, compared to U.S. wage growth of 33 percent, or 3¾ percent annually. In 1990, the average Arizona construc-

tion wage (\$22,061) was nearly 14 percent behind the U.S. average (\$26,150). By 1999, the state narrowed the gap by more than four percentage points — \$30,859 vs. \$34,798.

Much of the state's wage gains in construction were attributable to the major industry group of Special Trades (e.g., plumbers, carpenters), Standard Industrial Classification Code

No. 17. Special Trades was responsible for more than half of the growth in Arizona construction employment during the decade, more than doubling from 54,250 to nearly 111,900. Wages, however, grew at a more subdued, but still strong pace (40.6 percent, or about 4½ percent a year) during that period. Compared to national wage growth in SIC 17 of 33.2 percent during the '90s, Arizona's wage growth in Special Trades appears favorable, but the 6 percentage-point advantage must be tempered with the knowledge that U.S. Special Trades' employment grew only one-third as fast during the nine-year period.

Analyzing Special Trades' wages more closely, two of the strongest construction subsectors during the '90s were Concrete Work (SIC 177), and Masonry, Stonework (SIC 1741), which both had pay gains of more than 50 percent, or about 5½ percent annually (see Figure 6). Nationally, these two sectors each had wage growth of 33 percent.

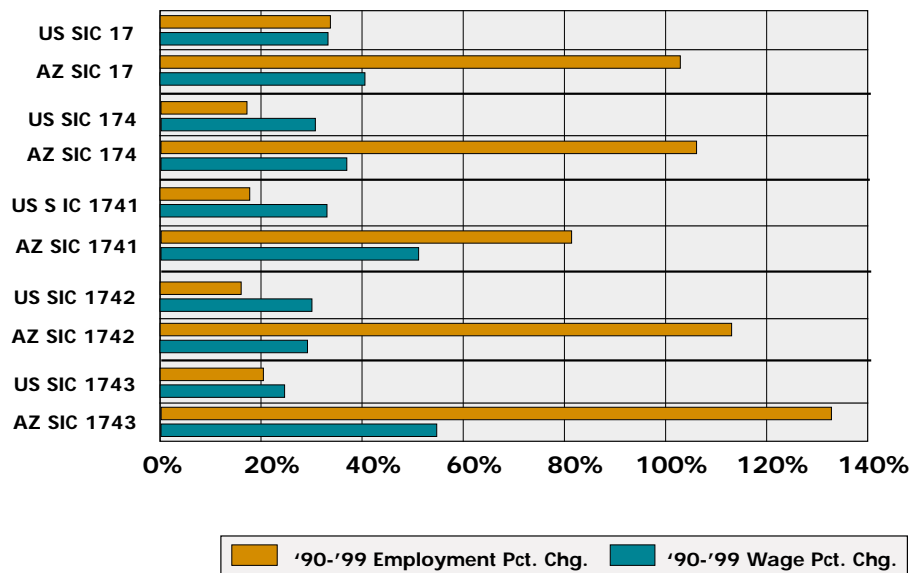
But despite SIC 1741's strong showing, the three-digit sector that it's a subsector of — SIC 174 - Masonry, Stonework, Tile Setting, and Plastering — performed about two-thirds as well (36.8 percent) and 12 percentage points below major group 17.

The reason: sluggish growth in SIC 174's largest subsector, SIC 1742 (Plastering). Workers in SIC 1742, which makes up two-thirds of SIC 174's employment, had slightly slower wage growth than SIC 1742 workers across the country (29.2 vs. 30.1 percent), despite seven times faster job growth in Arizona (113 percent vs. 16 percent). Add to the fact that SIC 1742's employment — which jumped from 10,800 to 22,270 — makes up about one-fifth of Special Trade's overall employment, and the wage weakness affects not only Special Trade's wage growth, but overall construction's as well.

If, for example, SIC 1742 wages had

Figure 6

Employment and Wage Percentage Change in U.S. and Arizona Special Trades (SIC 17) Construction, and Masonry (SIC 1741), Plastering (SIC 1742), and Tile-Setting (SIC 1743) Subsectors, 1990-'99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

grown at the same rate as pay in SIC 174 (36.8 percent), SIC 174's pay growth over the '90 to '99 period would have increased to 42 percent. This is a conservative example, since it would make more sense to use wage growth of SICs closely associated with SIC 1742. The average growth of SIC 1741 and 1743 was somewhere around 52 percent.

Because of the strong employment growth in SIC 1742, it would appear that two factors were holding down wages. First, most of the new workers came in at an entry-level wage and second, as pointed out in a 1996 *Arizona Economic Trends* article, a large percentage were illegal aliens — who have little or no bargaining power.³ Based on a 1994 survey of 500 Arizona companies, a Phoenix INS official estimated that up to 75 percent of workers in the "Plastering" portion of SIC 174 were illegal aliens, and that specifically contributed to

holding down that sector's wages. Since that time, the number of illegal aliens crossing over into Arizona has grown ever larger, prompting the state to ask the federal government for additional border protection.

Transportation, Communications, and Public Utilities

Lifted by several strong transportation sectors, the phenomenal growth of the cellular phone market, and an emerging sanitation industry, the state's TCPU (Transportation, Communications, and Public Utilities) division outperformed its national counterpart in pay gains by about one-third during the '90s — 26.5 percent vs. 17.2 percent. Most of the wage gains (24.6 percent), however, came between '94 and '99, with the communications industry performing particularly well in '99, with 10.1 percent growth. Also pushing overall

wage growth during the '90s was a decline in some of the lower-paid positions (e.g., operators) at local and long-distance telephone companies, which are now being contracted out to service companies (e.g., Excel Agent Services). Layoffs at Arizona electric utilities, where employment dropped 16 percent, also drove up wage overall averages in the public utility group (SIC 49).

Among the best-performing TCPU industries during the decade in terms of overall/annual wages were cellular phones (57 percent/6.3 percent), local and long distance telephone (47.8 percent/5.3 percent), travel services (59.6 percent/6.6 percent), sanitary services (75.5 percent/8.4 percent), and electric utilities (47 percent/5.2 percent). Among those that performed moderately well were trucking (31.5 percent) and air transportation (35.6 percent)

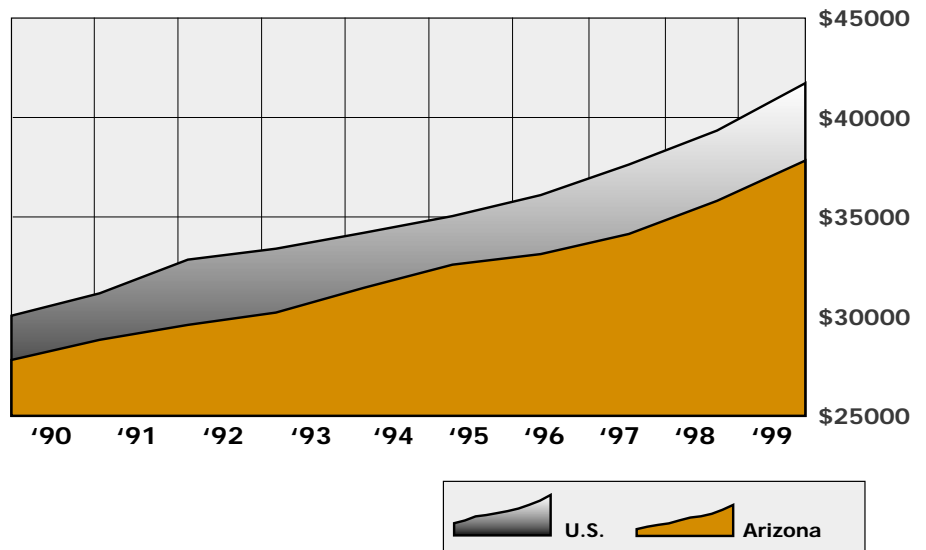
Compared to the U.S., the state's wages fared better in transportation sectors, while U.S. wages were stronger in the communications and public utilities industries (with a big exception of sanitation services). However, the much faster employment growth in Arizona transportation industries (nearly 50 percent) offset the better U.S. wage gains in the less ebullient communications and public utilities sectors.

Finance, Insurance, and Real Estate

With the exception of an extremely weak commercial banking sector in '97 — due to consolidations and layoffs of higher-paid workers — the state's FIRE industry posted strong wage growth in recent years. Between 1994 and '99, FIRE wages grew 28.7 percent (second highest among the state's major industry groups), or about 5½ percent a year. Excluding commercial banks, which employ about 20 percent of FIRE's more than 100,000 workers, wage growth would have been significantly higher during that five-year period. But it's unlikely it would have made a difference in

Figure 7

Arizona vs. U.S. Average Annual Transportation, Communications, and Public Utilities Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

comparison to the national FIRE wage, which jumped an amazing 41.1 percent (highest of any major industry group). At the end of '99, Arizona's FIRE wage trailed the national average by more than \$12,000 — \$38,597 vs. \$50,865.

Arizona's FIRE industry proved the old adage that it's not just the quantity (of jobs), but the quality (of jobs) that's important. The state left the rest of the nation in the dust in employment growth, outpacing the U.S., 48.5 percent to 12.8 percent. But wage growth was another story. Although Arizona had 53.5 percent (or 6 percent annual) pay gains during the nine-year period, the nation had growth of 71.4 percent.

A number of factors played into those numbers. Arizona was a magnet for credit-card servicing companies during much of the '90s. Employment in the major industry group where these types of companies can be found (Credit Institutions, SIC 61), soared 350 percent, or nearly

40 percent annually, during the '90s. U.S. job growth in SIC 61 was still strong, 89.4 percent, but one-fourth the amount. But those jobs' wages grew 57.4 percent, compared to similar jobs in Arizona that increased about 49 percent.

Similar stories were prevalent throughout FIRE. Arizona had 18.2 percent employment growth in Depository Institutions (SIC 60), compared to -9.1 percent for the nation. (These numbers reflect the collapse of the savings and loan industry in the late '80s and early '90s. In SIC 62, Security and Commodity Brokers, employment growth in Arizona was nearly triple that of the nation. Yet, wage growth was nearly one-third greater in the nation.

But there were a few exceptions to the rule. Employment, as well as wages, grew faster in Arizona in SIC 64 (Insurance Agents) and (SIC 65) Real Estate. Insurance Agent employment in Arizona outgrew the nation, 17.6 percent to 13.5 percent, while

wages were 11 percentage points higher — 52.9 percent to 42 percent. And in SIC 65, Arizona had nearly 26 percent growth in jobs, compared to 29.5 percent for the nation, while wages jumped in Arizona 59.2 percent to 44 percent for the U.S.

Wholesale Trade

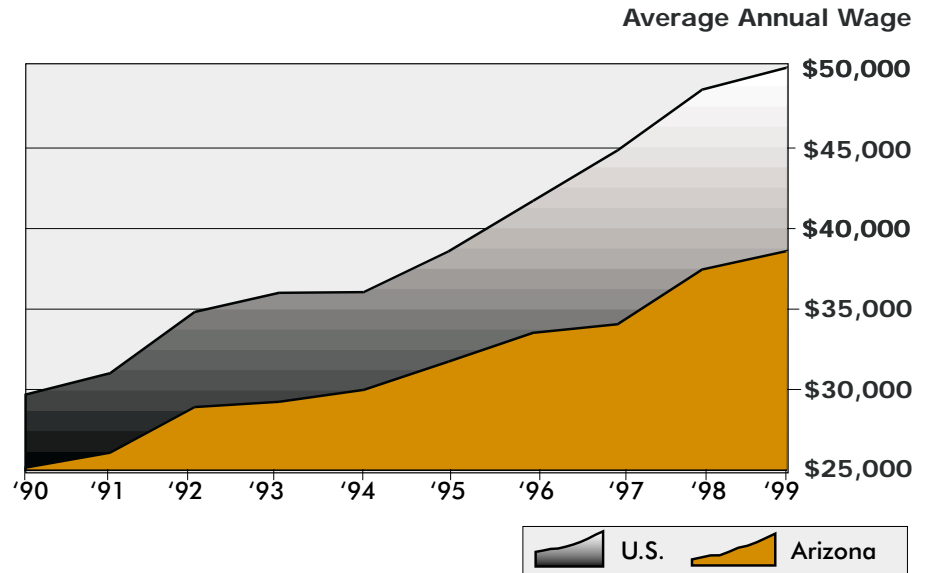
The state's only major industry to experience higher wage gains than manufacturing during the past half-dozen years has been wholesale trade. Average annual wages grew 40 percent between '93-'99, or 6.2 percent annually, with a rate at or above 7 percent the last three years of that period. In 1995, wholesale trade pay in Arizona trailed the U.S. average by more than \$3,600 (\$32,355 vs. \$35,982), but by the end of 1999, Arizona's wholesale trade industry had cut the gap by more than 60 percent to less than \$1,500 (\$42,664 vs. \$44,144).

The emergence of electronics distributor Avnet, which moved its corporate office and much of its operations to Phoenix in late 1990s, and the continued growth of the Valley as a distribution hub for the Southwest and Mexico, would account for a majority of the wage growth in wholesale trade. Employment in wholesale trade statewide actually peaked in 1998 at 109,100, with a small loss of jobs in 1999. (Preliminary numbers for 2000 show a slight gain, but still less than the '98 total.) But wage growth is likely to tail off in 2000 and 2001, not only because of a U.S. economic slowdown, but because one of wholesale trade's largest employers, Tempe-based MicroAge Inc., filed for bankruptcy in 2000 and began selling off its computer wholesale and service business.

There were several major industries behind wholesale trade's strong growth. Within durable-goods industries, office equipment (SIC 504) recorded 71 percent wage growth to go along with its 61 percent employment growth; and electrical goods (SIC 506) had nearly as strong wage increases

Figure 8

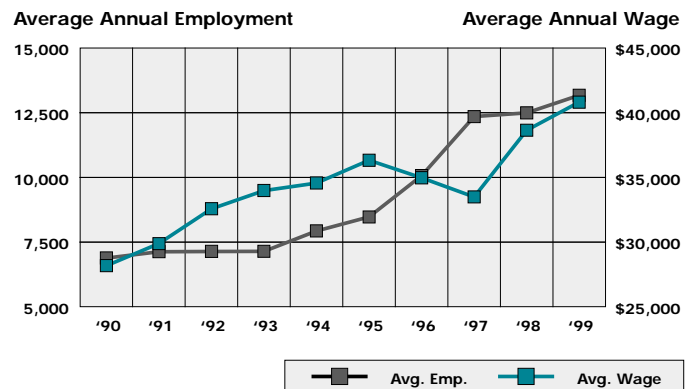
Arizona vs. U.S. Finance, Insurance, and Real Estate Average Annual Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

Figure 9

Average Annual Employment and Wage for Arizona Functions Related to Depository Banks (SIC 609) , 1990-'99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

(69.3 percent), to go along with sizzling 106 percent job growth (see Figure 11).

Although not quite as strong as durable goods, nondurable-goods wholesale trade fared well the past

decade, having wage and employment growth of 48.2 percent and 51 percent, respectively. Distribution operations for grocery stores (SIC 514) stood out as a major industry, producing 42.4 percent wage and 49.2 percent employment growth. In fact, SIC 514 gained 2,200 employees (13.1 percent) in '99, to go along with 6.3 percent wage growth.

Retail Trade

Arizona's retail trade sector, which has been hard-pressed to find workers for an explosion of national retail stores and shopping centers, had consistently faster wage growth than the nation between 1994 and '99. Arizona retail trade wages grew 25.5 percent, compared to U.S. growth of 22.3 percent. The average retail trade worker in Arizona earned \$900 more than the average worker nationally in '99, with the state's average wage (\$18,414) ranking 11th among all states and D.C. (It should be noted that the average wage for retail trade is significantly lower than other industries because a large percentage of people in this industry work part-time.)

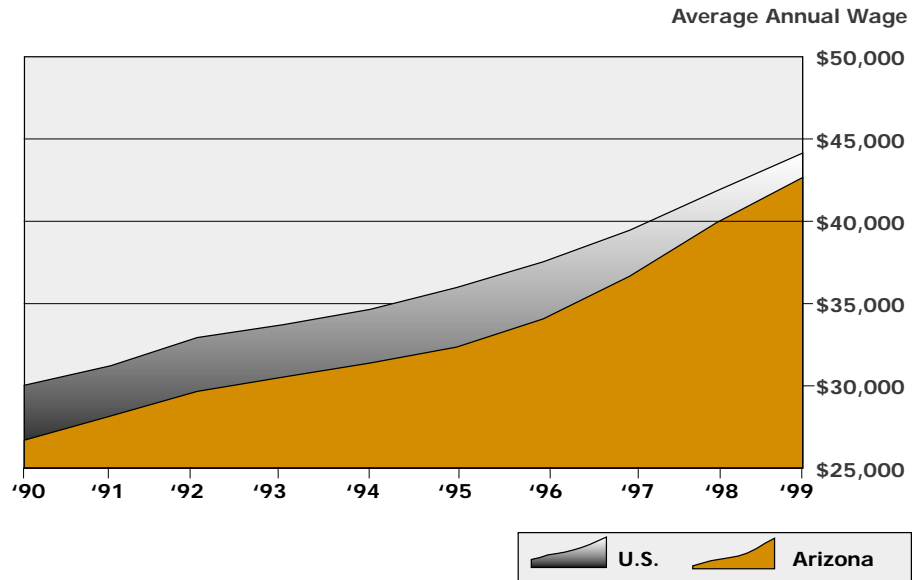
It makes sense that with shopping centers sprouting up like wildflowers after a wet winter season, the retail sector would prove to be one of Arizona's strongest industries in terms of employment, as well as wage growth, during the '90s. In fact, Arizona outdistanced the nation in employment growth in every major two-digit group and all but one in wage increases.

Compared to the nation as a whole, Arizona had more than twice the growth rate in employment (37.3 vs. 16.3 percent) and 20 percent faster wage growth (47.6 vs. 38.4 percent). That enabled the state to go from an overall retail trade wage 3.4 percent below the U.S. average to a wage 4.5 percent above the nation's average (see Figure 12).

A shortage of workers in Arizona due to a rapidly expanding population and economy — combined with

Figure 10

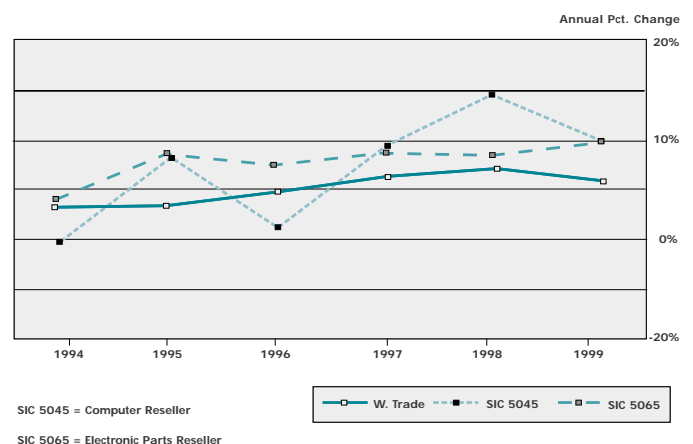
Arizona vs. U.S. Average Annual Wholesale Trade Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

Figure 11

Annual Percentage Change in Arizona Overall Wholesale Trade, Computers and Peripheral Equipment (SIC 5045), and Electronic Parts and Equipment, Not Elsewhere Classified (5065), 1994-'99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

an on-the-go society that prefers quick, available meals and shopping at mega-stores and malls to cooking

at home and knitting a sweater or blouse — spurred the growth of fast-service outlets and “power cen-

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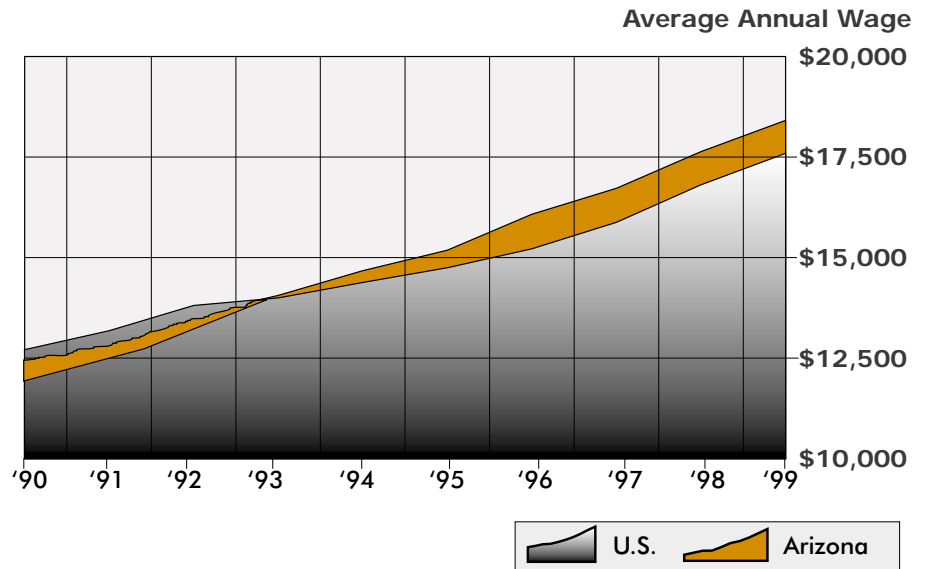
ters.” The biggest beneficiary of the explosion of retail jobs were entry-level workers, who saw their wages rise quicker than those at top end of the scale.

Sectors related to the home-building industry experienced the greatest combined employment and wage growth in retail trade during the '90s. Sectors in Building Materials (SIC 52) and Home Furnishings and Furniture (SIC 57) each had employment growth of more than 70 percent (8 percent a year) and wage growth around 40 percent (4½ percent a year). Within SIC 57, one three-digit and one four-digit sector stood out – Radio, Television, Music and Computers SIC (573) and Computers (5734). SIC 573 doubled its employment (9,000 vs. 4,500) and had wage growth of 27 percent, while SIC 5734 had employment growth of just under 70 percent and wage growth of 20 percent.

Other retail trade sectors where Arizona outdistanced the country as a whole were Eating and Drinking Establishments (SIC 58), Food Stores (SIC 54), Auto Dealers (SIC 55), and Miscellaneous Retail (SIC 59). In Eating and Drinking Establishments, Arizona had one-third faster employment growth (31 percent vs. 19 percent) to go with one-fifth faster wage growth (50 percent vs. 40 percent). In the catchall industry of Miscellaneous Retail (SIC 59), which contains groups such as drug stores and sporting goods stores, the state had 40 percent faster job growth and 17 percent faster pay growth. Employment growth was more subdued (23.2 percent) in Food Stores, but still three times as fast as the rest of the country, while wages rose about one-fourth faster (42 vs. 30 percent). Finally, the state's wide-open spaces helped Arizona outrace the nation in Auto Dealer employment and wage growth. SIC 55 employment in the Grand Canyon State increased three times as fast, while pay was better by more than 20 percent.

Figure 12

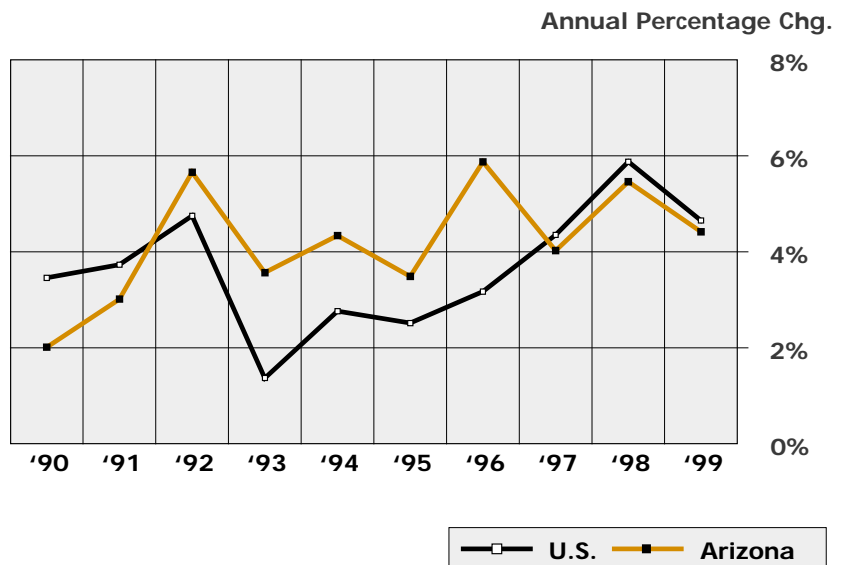
Arizona vs. U.S. Average Annual Retail Trade Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

Figure 13

Arizona vs. U.S. Annual Percentage Change in Average Annual Retail Trade Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

Services

Arizona's average wage benefitted from the employment and pay growth

of a wide range of services businesses during the 1990s. Services sectors that included temporary help agen-

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cies, charter schools, and computer servicing companies accounted for much of the state's 70.6 percent increase in services employment and 41.2 percent growth in the average wage. Although the U.S. wage growth in services was slightly higher (43.1 percent) than in Arizona, job growth (37.9 percent) was only slightly more than half of Arizona's growth rate. Arizona wage growth held its own in Services, but grew slightly less than the nation – 67.9 percent vs. 61.6 percent.

In every two-digit industry group, Arizona had faster employment growth, and in most cases had twice the growth rate. At the same time, the state's two-digit industries matched the national growth rate for pay in most cases, and in some instances outgrew their respective industries nationwide.

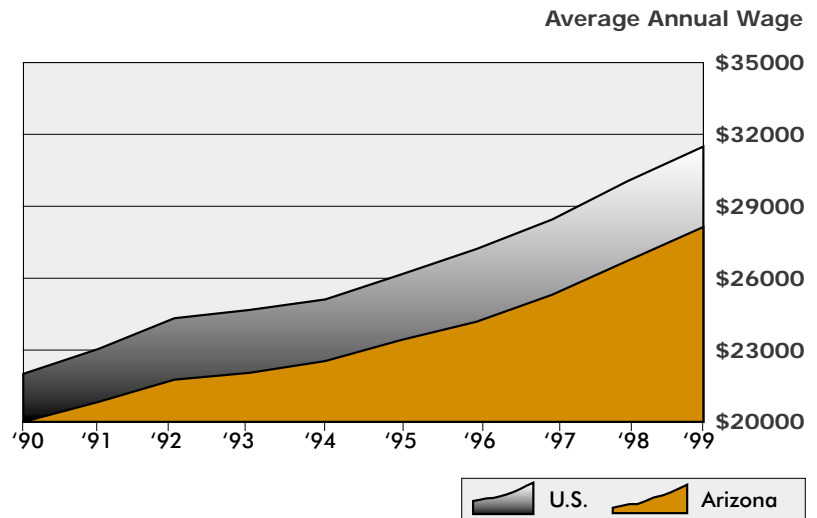
In Educational Services (SIC 82), where Arizona led the nation in charter school growth, job growth was nearly four times as great as the nation's and wages grew about one-third faster (61.6 percent vs. 42.8 percent). The same held true with Business Services (SIC 73) — with high-flying industries such as Personnel Services and Computer Programming — where employment skyrocketed 161 percent versus 77 percent for the nation. Without Business Services (SIC 73), Arizona wages in Services would have increased just 29.4 percent between 1990 and '99, instead of 41.2 percent.

Mining

One industry that has fallen on hard times has been mining, particularly copper mining, which has consistently lost employment over the last 15 years due to technological improvements and competition from lower-paid foreign markets. With the exception of strong wage gains in '96 and '99, wage growth was flat or negative between 1994 and '99. And the prognosis is not good for the copper mining industry, which has seen several major operations close in the past few years.

Figure 14

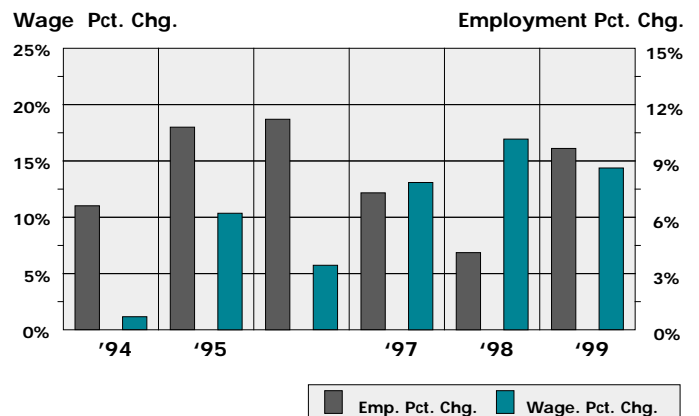
Arizona vs. U.S. Annual Average Services Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

Figure 15

Annual Percentage Change in Arizona Business Services Employment and Average Wage, 1994-'99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

Government

For this article, government wages were not analyzed due to some problems with state government wage data in the early '90s. Although government workers in Arizona -- particularly state government -- did not fare well

in the early '90s, the significantly increased wage gap (see Figure 17) between Arizona and the nation was not a totally accurate portrayal. In reality, the difference may have been half as much. Nevertheless, the wage difference between in the late '90s tends to

be a more accurate representation.

Metro-Area Pay

Wages in the state's four metropolitan areas (MAs) had strong spikes — up and down — during the '90s. A small part of that can be attributed to problems with government wage data. But most of the wage drought was caused by a large supply of labor entering the state's workforce, primarily due to population growth.

Perhaps the best sense of how the metro areas fared would be obtained by looking at the strongest period of growth for the nation and Arizona during the decade — 1994-'99. Wages in the Tucson and Phoenix MAs grew at nearly an identical rate, 26.5 and 26 percent, respectively, between '94 and '99, outdistancing the national average (23.9 percent) by a healthy two percentage points. In that time, the state's two largest MAs also moved up sharply in the rankings among 316 metro areas in the nation (including Puerto Rico) tracked by the U.S. Department of Labor's Bureau of Labor Statistics.

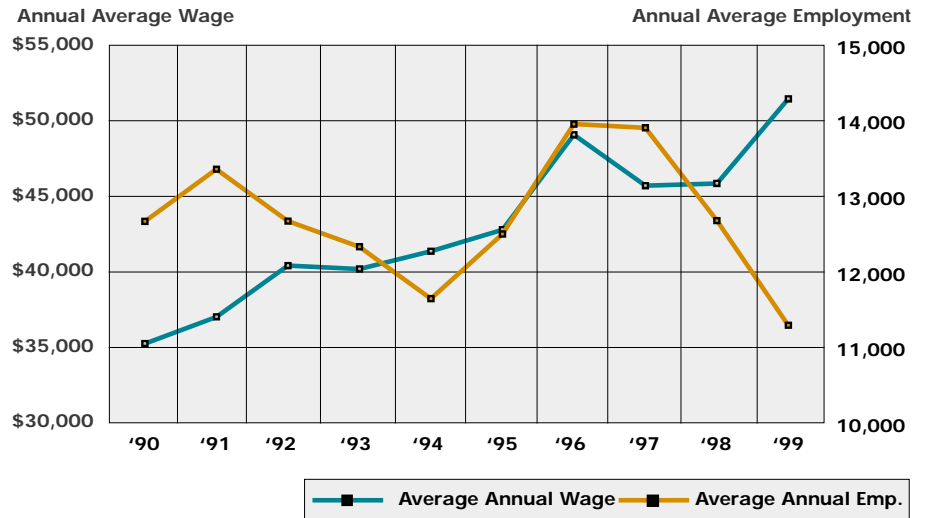
Strong high-tech manufacturing job growth accounted for much of the gains in the two largest metro areas, with the Phoenix MA's concentrated in semiconductor-related industries and the Tucson MA's in aerospace and defense-related sectors. The Flagstaff MA had moderately strong wage gains between '94 and '99, ending the period with nearly 22 percent growth, while the agriculture-dominated Yuma MA had weak growth (13.2 percent) during the period, except for 1997. A rise in the minimum wage likely accounted for more than half of the Yuma MA's gains for the five-year period in that single year, when wages spiked 6.9 percent.

The wholesale and retail trade and FIRE industries also contributed to the Phoenix MA's wage strength, while a rebound in government wages also gave a boost to the Tucson and Flagstaff MA's overall gains.

Looking at 1999 numbers, despite

Figure 16

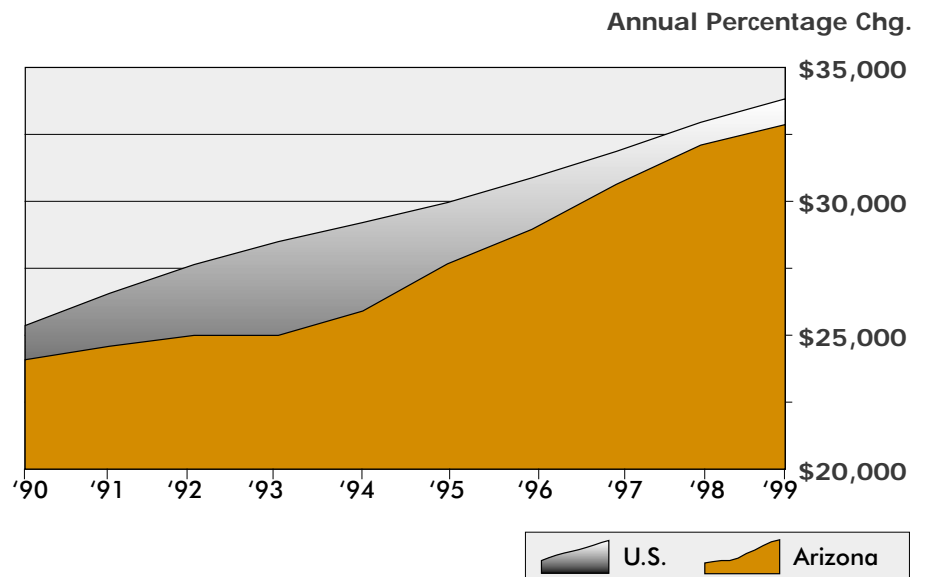
Arizona Annual Average Mining Employment and Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

Figure 17

Arizona vs. U.S. Government Average Annual Wage, 1990-99



Source: Arizona Dept. of Economic Security, Research Administration, November 2000

wage growth slightly below the national metro average of 4.4 percent, the Phoenix-Mesa MA moved up in the national rankings seven spots to 57th, its highest ranking in more than a decade.

In the early 1990s, the metro area had fallen to as low as 104th place due to faster growth than the nation in lower-paying service-sector jobs and the fallout from the S&L crisis. The av-

ARIZONA INDUSTRY WAGES IN '90S

average wage for the Phoenix-Mesa MA in '99 was \$32,430, about 7 percent (nearly \$2,500) below the national metro average of \$34,868. In '94, the MA was about 10 percent below the U.S. average.

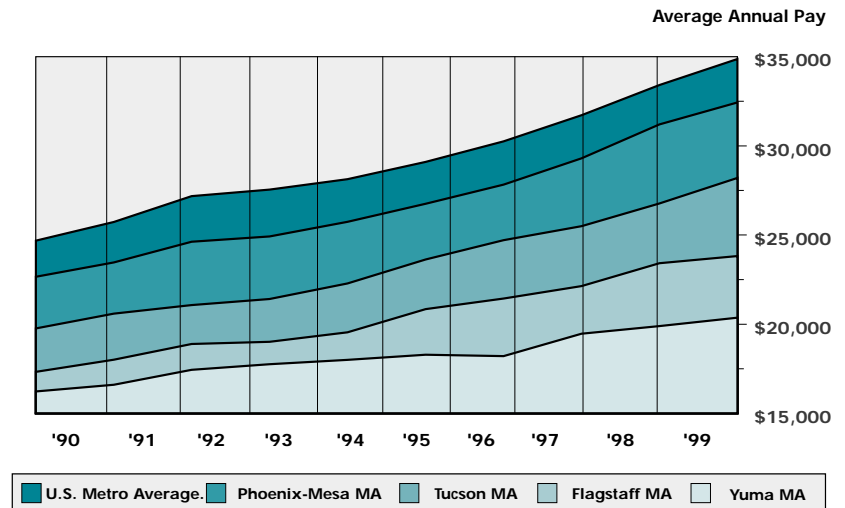
The Tucson MA (Pima County) has also improved its standing among metro areas in recent years, including '99, when its 5.3 percent wage growth brought its annual pay to \$28,194. The Tucson MA ranked 151st in '99, up 27 places from '98 and almost 100 spots better than in 1992, when the MA was 244th among metro areas. And with the continued expected growth of the aerospace and defense industries — particularly in light of President Bush's emphasis on a missile-defense system — the outlook for Tucson's wage growth appears solid.

Although the Flagstaff metro area (which includes Coconino County, Arizona, and Kane County, Utah) has shown improved wage growth during the past five years, the MA still ranks 282nd among all metro areas. A miserly 1.7 percent growth rate in '99 didn't help the MA's cause, pushing the metro area's ranking down two places. And with an economy still dominated by service industries, it isn't likely that annual wage growth will be able to exceed the 4-plus percent of the '94-'99 period. However, Flagstaff is in the process of studying ways to increase economic development, particularly in industries such as wholesale trade and manufacturing, which could help raise its average annual pay.

With nearly 30 percent of the Yuma MA's workforce employed in agriculture, it isn't likely that annual wage growth will exceed the 3 percent average of the '94-'99 period. Without two minimum-wage increases in '96-'97, wage growth would have been less than 2 percent annually. In '99, the average wage in the Yuma MA (Yuma County) was \$20,363, ranking the metro area ahead of only 10 other (including three in Puerto Rico). However, "hope springs eternal," and

Figure 18

Average Annual Wage for Overall U.S. and Arizona Metro Areas, 1990-'99(a, b, c)



Notes:

- a) Phoenix Metro Area included Pinal County starting in 1990
- b) Yuma County became a metro area in 1990
- c) Flagstaff MA includes Coconino County in Arizona and Kane County in Utah

Source: Arizona Dept. of Economic Security, Research Administration, November 2000

continued economic activity along the Mexican border (about 50 miles to the south) due to NAFTA may lead to higher wages as the area broadens its industry base.

Note: Research assistance was provided for the article by John Graeflin, RA Research and Statistical Analyst.

Notes:

- 1. "Decade of Subpar Increases Due to Several Factors," Brent Fine, *Arizona Labor Market Information Newsletter*, October 1991, p. 2.
- 2. Arizona ranked 26th in average annual wage in 1990 vs. 23rd at end of the decade.
- 3. Based on an August 1994 survey of employee I-9 forms of 500 Arizona companies by the U.S. Immigration and Naturalization Service, "Construction 'Nirvana' Surprised Most," Brent Fine, *Arizona Economic Trends*, Fall 1996.
- 4. Employment data used in this analysis are the product of a

federal-state cooperative program in which state employment security agencies (SESAs) prepare summaries of employment and total pay of workers covered by unemployment insurance (UI) legislation. The summaries are a by-product of the administration of State Unemployment Insurance programs that require most employers to pay quarterly taxes based on the employment and wages of workers covered by UI. Data cover about 95 percent of all workers.

—Brent Fine,
Arizona Economic Trends Editor

Pay Growth Moderated in Arizona, U.S. in '99

After outpacing the nation the previous few years, Arizona's annual average wage growth fell slightly below the rest of the country in 1999 — 4.1 percent vs. 4.3 percent. But despite the shortfall, the state's annual average of \$30,523 maintained the same ranking (24th) as in '98 among all states and Washington D.C. The U.S. average in '99 was \$33,313, slightly over 9 percent higher than Arizona's average.

A good part of the state's slower wage growth compared to recent years (6 percent in '98; 5 percent in '97) was due to a slowdown in manufacturing pay, which grew 3.3 percent, about 1.2 percentage points below the U.S. average gain. In '97 and '98, Arizona manufacturing pay grew about 7.3 percent each year.

On the positive side, wholesale trade pay maintained its strong growth trend of recent years in '99, gaining nearly 7 percent, almost 2½ percentage points above the nation's average gain. Between 1996 and '99, wholesale trade pay in Arizona jumped nearly 30 percent. Still, Arizona's wholesale trade pay still lags the U.S. average by about \$1,500 — \$42,664 vs. \$44,144.

The average annual pay of all workers covered by state and federal unemployment insurance (UI) programs rose 4.3 percent to \$33,313 in 1999, according to preliminary data released today by the Bureau of Labor Statistics of the U.S. Department of Labor. This compares with a 5.2 percent rise in 1998. The annual pay of private industry workers, comprising 84.7 percent of the nation's employment, grew 4.6 percent in 1999, while pay for government workers rose 2.7 percent. In 1998, the increase in pay for private sector workers was 5.6 percent and for government workers, 3.2 percent.

Pay growth for U.S. workers in 1999, at 4.3 percent, slowed from the growth in 1998 and 1997, but was the

Table 1

Arizona and U.S. Average Annual Major Industry Wage, 1999, and Percentage Change⁽¹⁾

	Annual Pay		Percent
	1999 ⁽²⁾	1998	Change. ⁽³⁾
United States			
Private Industry ⁽⁴⁾	\$33,220	\$31,762	4.6%
Mining	54,653	52,066	5.0
Construction	34,798	33,386	4.2
Manufacturing	41,918	40,092	4.6
TCPU ⁽⁵⁾	41,729	39,345	6.1
Wholesale Trade	44,144	41,831	5.5
Retail Trade	17,592	16,810	4.7
FIRE ⁽⁶⁾	50,865	48,641	4.6
Services	31,491	30,053	4.8
Government	\$33,830	\$32,953	2.7%
Arizona			
Private Industry ⁽⁴⁾	\$30,133	\$28,856	4.4%
Mining	51,452	45,851	12.2
Construction	30,859	29,378	5.0
Manufacturing	44,198	42,770	3.3
TCPU ⁽⁵⁾	37,831	35,805	5.7
Wholesale Trade	42,664	39,899	6.9
Retail Trade	18,418	17,637	4.4
FIRE ⁽⁶⁾	38,597	37,449	3.1
Services	28,135	26,725	5.3
Government	\$32,871	\$32,099	2.4%

Notes:

- Includes workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs
- Data are preliminary
- Percent changes were computed from unrounded average annual pay data and may differ from those computed using data rounded to the nearest dollar
- Includes data for industries in addition to those shown separately
- Transportation, Communications, and Public Utilities
- Finance, Insurance, and Real Estate

Source U.S. Department of Labor, Bureau of Labor Statistics, November 2000

fifth highest in the 1989-99 period.

Among all states, Connecticut had the highest pay level (\$42,653) in 1999, followed by New York (\$42,133), Massachusetts (\$40,331), California (\$37,564), and Illinois (\$36,279). Counting all jurisdictions, the District of Columbia had the highest annual average pay level (\$50,742).

Among the states with below-average annual pay, Montana posted the lowest pay (\$23,253) in 1999. The next lowest pay levels were in North Dakota (\$23,753), South Dakota (\$23,765), Mississippi (\$24,392), and Arkansas (\$25,371). No state reported a decline in average annual pay.

Overall, pay gains moderated in 1999 compared with the previous year. Annual pay grew by at least 4 percent in 18 states, whereas 40 states reached this growth rate in 1998. On the high end of the growth scale, only four states posted pay increases of 6 percent or higher in 1999, compared with seven states in 1998. Leading the nation in pay growth for the third year in a row, Washington's average annual pay advanced 8 percent in 1999, exceeding the national growth rate by 3.7 percentage points. For the fifth year in a row, Alaska registered the smallest pay increase (0.6 percent) in 1999.

Metro-Area Pay

(Note: For an analysis of the state's metro areas, look at the "Metro-Area Pay" section of the previous article.)

Average annual pay of employees within the nation's 316 metropolitan areas increased by 4.4 percent from 1998 to 1999, according to preliminary data from the Bureau of Labor Statistics of the U.S. Department of Labor. The over-the-year gain was smaller than 1998's gain of 5.2 percent. Annual pay in metropolitan areas averaged \$34,868 in 1999, up from \$33,407 in 1998.

Average annual pay for the entire nation, metropolitan and nonmetropolitan areas combined, was \$33,313 in 1999, a 4.3 percent increase from 1998.

Table 2

1999 Overall Average Annual Wage for U.S., Arizona, and Selected States

	Annual Pay		Percent Change ⁽³⁾	Overall Rank
	1999 ⁽²⁾	1998		
District of Columbia	\$48,462	\$50,742	4.7%	1
Connecticut	40,895	42,653	4.3	2
California	35,348	37,564	6.3	5
Washington	33,076	35,736	8.0	7
Colorado	32,248	34,192	6.0	11
United States ⁽⁴⁾	31,945	33,313	4.3	—
Texas	31,515	32,895	4.4	15
Nevada	30,203	31,213	3.3	21
Oregon	29,544	30,867	4.5	23
Arizona	29,322	30,523	4.1	24
Utah	26,873	27,884	3.8	34
New Mexico	25,711	26,270	2.2	42
South Dakota	22,751	23,765	4.5	49

Notes:

1. Includes the District of Columbia and Puerto Rico
2. Includes workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs
3. Data are preliminary
4. Totals for the United States were calculated using estimated data for New Jersey for the fourth quarter in 1999 and do not include data for Puerto Rico

Source U.S. Department of Labor, Bureau of Labor Statistics, November 2000

San Jose, Calif., the hub of Silicon Valley, led the nation with an average annual pay level of \$61,110 in 1999. New York, N.Y., had the second highest average annual pay level (\$52,351), followed by San Francisco, Calif. (\$50,169), New Haven- Bridgeport-Stamford-Waterbury- Danbury, Conn. (\$47,142), and Seattle-Belleview-Everett, Wash. (\$43,921).

Excluding MSAs within Puerto Rico, Jacksonville, N.C., continued to record the lowest average annual pay among metropolitan areas in 1999 (\$20,280). The second lowest pay occurred in Yuma, Ariz. (\$20,363), followed by Brownsville-Harlingen-San Benito, Tex. (\$20,997), McAllen-Edinburg-Mission, Tex. (\$21,105), and Myrtle Beach, S.C. (\$21,691). These five MSAs had the lowest average annual pay in 1998 as well.

Note:

1. Data on average annual pay are the product of a federal-state cooperative program in which State Employment Security Agencies (SESAs) prepare summaries of employment and total pay of workers covered by unemployment insurance (UI) legislation. The summaries are a byproduct of the administration of State Unemployment Insurance Programs, which require most employers to pay quarterly taxes based on the employment and wages of workers covered by UI.

—DES, Research Administration,
and U.S. Department of Labor,
Bureau of Labor Statistics,

Unemployment Rate Lowest Since '60s in 2000

(continued from front page)

record high number in the fourth quarter of 2000.

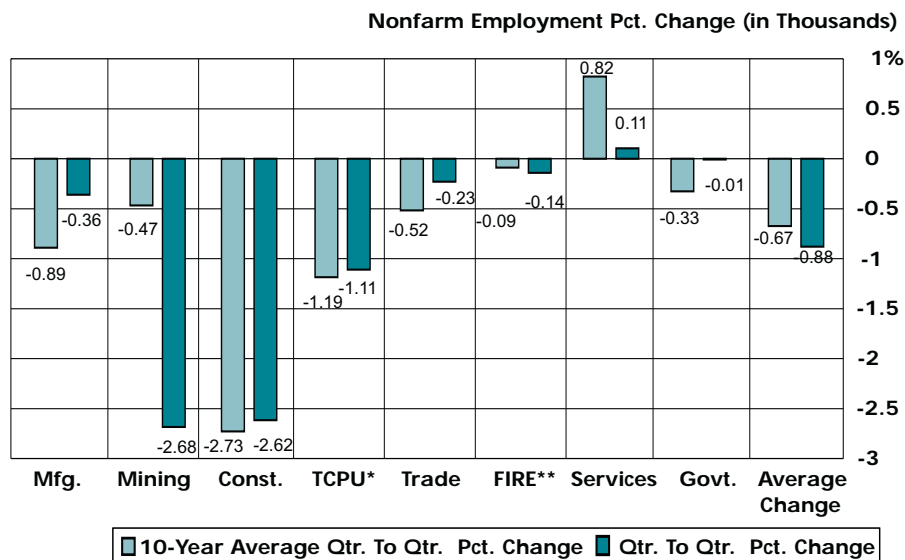
One factor braking the pace of the expansion was the increased interest rates. The higher interest rates were by the design of the Federal Open Market Committee (FOMC) Chairman Alan Greenspan. His attempt was to end what he termed, "irrational exuberance," concerning the inflationary- and speculative-fueled growth of the economy. He deemed that people were overly optimistic about the future growth of the economy.

The result would be the overworking of the economy as it burned itself out of resources such as labor. Over-optimism was the result of not recognizing that there are limits to growth. Record high prices in the stock market and the record level of consumer debt were the signs of irrational exuberance. Stock prices reflected the investor's opinions of the future profits of the company. Consumers took on increasing levels of debt because they believed that their future incomes would increase to a level to repay their debts. If the economy continued to grow at the rapid pace of 1999 into 2000, then it would have exhausted the supply of resources. The outcome would start with inflation and then possibly end in recession. Mr. Greenspan wanted to achieve a "soft landing" with slower growth rather than inflation with a risk of a recession.

To avoid inflation and reduce the growth rate of the economy down to a more realistic level, the Federal Reserve incrementally raised the key interest rate throughout the year. Higher interest rates increased the cost of borrowing money. Spending shifted away from investment and consumption and toward debt repayment. Inventories in stores and factories rose as people bought less than producers expected. Consumers had their purchasing power reduced by more expensive debt repayment costs and higher energy prices. The stock

Figure 1

Quarterly and 10-Year Average Quarterly Percentage Change in Arizona Major Industry Employment, 1st Qtr. 2000



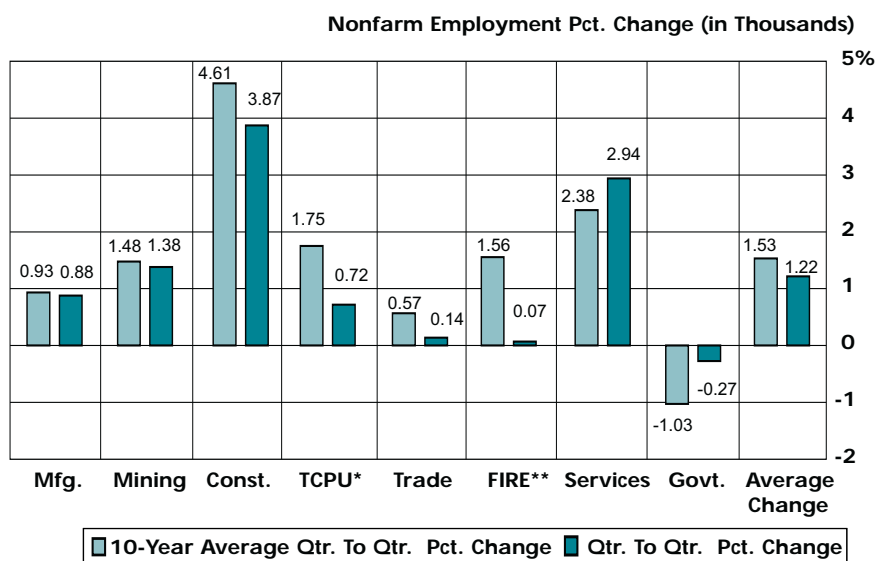
* Transportation, Communications, and Public Utilities

** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Figure 2

Over-the-Year Percentage Change and 10-Year Over-the-Year Percentage Change in Arizona Major Industry Employment, 1st Qtr. 2000



* Transportation, Communications, and Public Utilities

** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Source: Arizona Dept. of Economic Security, Research Administration, March 2001

market rise finally peaked in March 2000 and then began a downward descent with the cooling sales levels and inventory buildup.

Despite slowing growth in 2000, the year ended a good decade for the economy of the Grand Canyon State on two accounts. Development of a high-tech manufacturing base for both the civilian and military sectors is the first account. These manufacturing sectors allowed the state to benefit from some of the most important technological advancements of the decade, including computers, Internet, and telecommunications. Second, the first year of the new decade began with Arizona being ranked number two among the states in the nation for the pace of nonfarm employment growth.

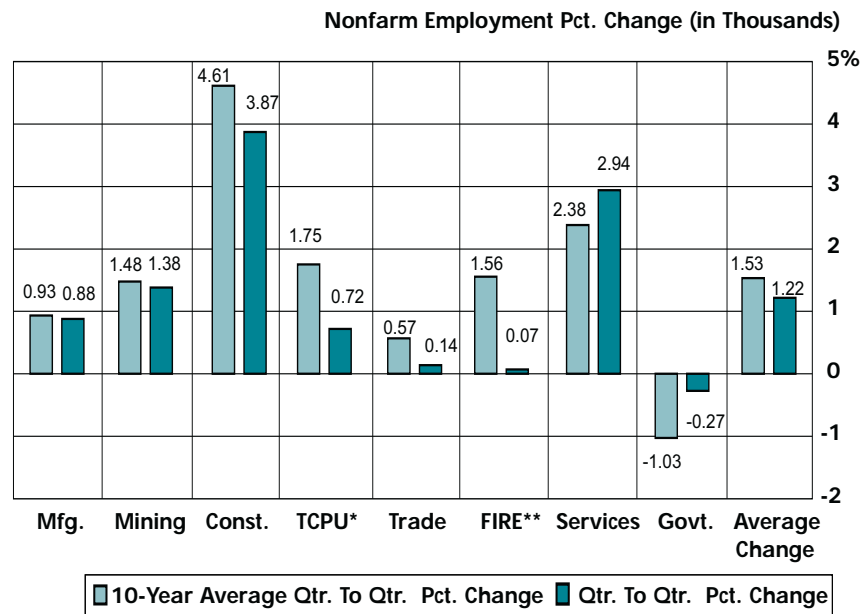
Arizona, as a part of the national economy, experienced the slowdown caused by higher interest rates and energy prices in the year 2000. The state's geographic location and climate counteracted some of the effects of the slowdown. Trade routes cross the state by running between California, Mexico, Texas and areas to the north such as Canada. Since the passage of North America Free Trade Agreement (NAFTA) in the 1990s, trade has increased with the opening of export markets, especially in Mexico. Many firms relocated to the state because of the trade routes and its favorable climate. People moved to Arizona to find employment and a more desirable climate. Arizona's population has been growing largely as a result of these trends.

Year 2000

During the year 2000, strong demand lifted Arizona's employment level to a record high (2,308,500 people) in the fourth quarter, after remaining near 1999 levels for the first three quarters. The good job market resulted in people more easily joining the work force. As a result, the civilian labor force reached an all time record high in the fourth quarter of 2000. Increasing numbers of unemployed found jobs causing the number of unemployed to decrease to a

Figure 3

Quarterly and 10-Year Average Quarterly Percentage Change in Arizona Major Industry Employment, 2nd Qtr. 2000



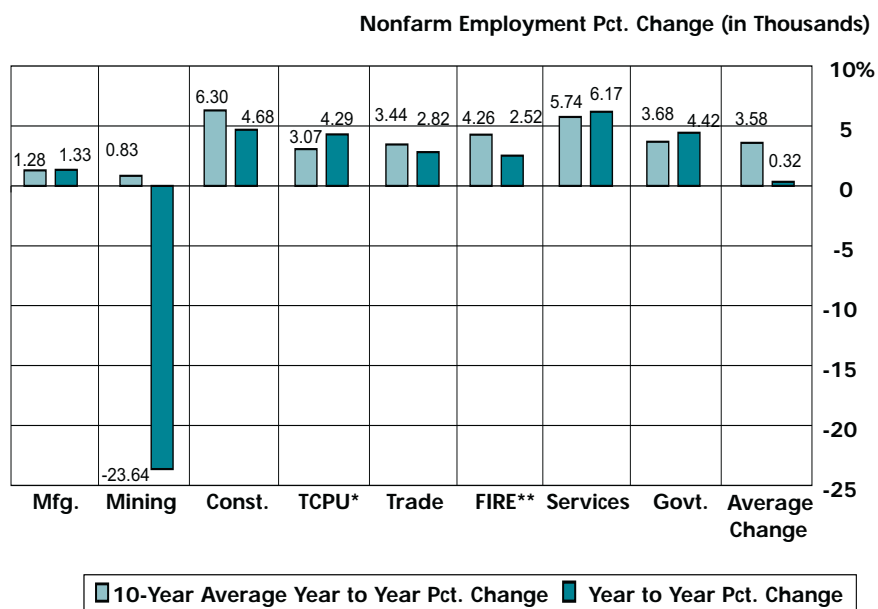
* Transportation, Communications, and Public Utilities

** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Figure 4

Over-the-Year Percentage Change and 10-Year Over-the-Year Percentage Change in Arizona Major Industry Employment, 2nd Qtr. 2000



* Transportation, Communications, and Public Utilities

** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Source: Arizona Dept. of Economic Security, Research Administration, March 2001

low level not seen since 1989. As labor demand increased at a faster rate than the supply, the unemployment rate dropped.

The strong labor demand helped to elevate Arizona's nonfarm payroll employment to a record high (2,248,000) in 2000. The year gained on average 77,000 net new jobs. The annual increase slowed in comparison to recent years. Nonfarm employment annual growth has been slowing since 1995.

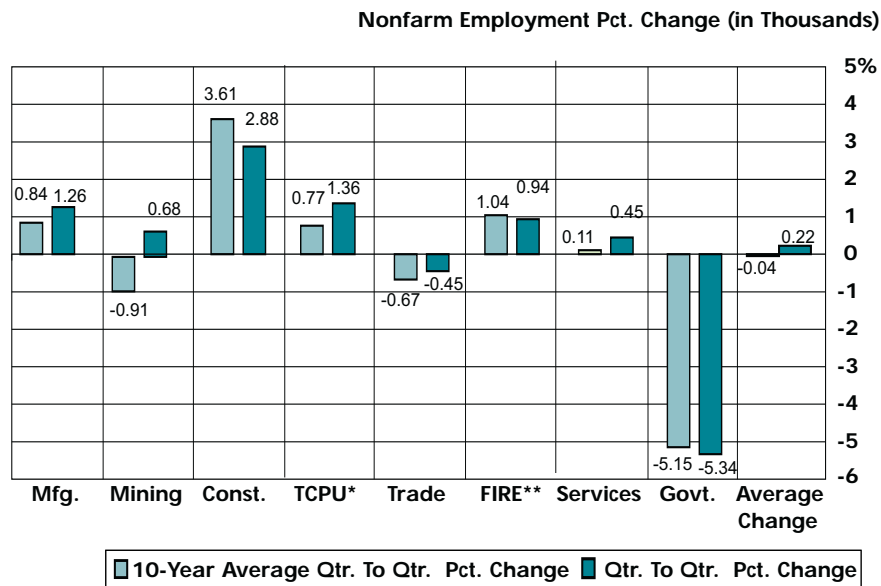
The slowing growth in its largest part, the services-producing industries, restrained the pace of expansion of nonfarm jobs. Growth in these industries represented 86 percent of the nearly 77,000 net new jobs in the nonfarm employment. With an increase of 65,900 net new jobs, the service-producing industries averaged 1,861,400 jobs over the year.

The goods-producing industries began to recover from the 1999 growth slump. Their accelerated growth was not able to boost the expansion pace of the whole economy because of the goods-producing industries' smaller size in comparison to the service-producing industries. The goods-producing industries averaged about 387,000 jobs on its payrolls over the year with an increase of 10,700 net new jobs.

Manufacturing experienced a revival of expansion in 2000 after suffering through a bout of contraction in the previous year. Manufacturing gained 3,900 net new jobs over the year. While employment gains were made in 2000, losses occurred in 1999 with a reduction of 1,000 jobs. The downturn in the previous year was the result of the Asian economic crisis, declining export markets, some softening of domestic demand, and rising interest rates. A noneconomic (Standard Industrial Classification) code change also depressed manufacturing employment by counting the jobs in other industries.^{1, 2} Faster growth occurred in 2000 for two reasons: The first was the resurgence of export markets where Arizona's manufactured goods were sold, especially in

Figure 5

Quarterly and 10-Year Average Quarterly Percentage Change in Arizona Major Industry Employment, 3rd Qtr. 2000



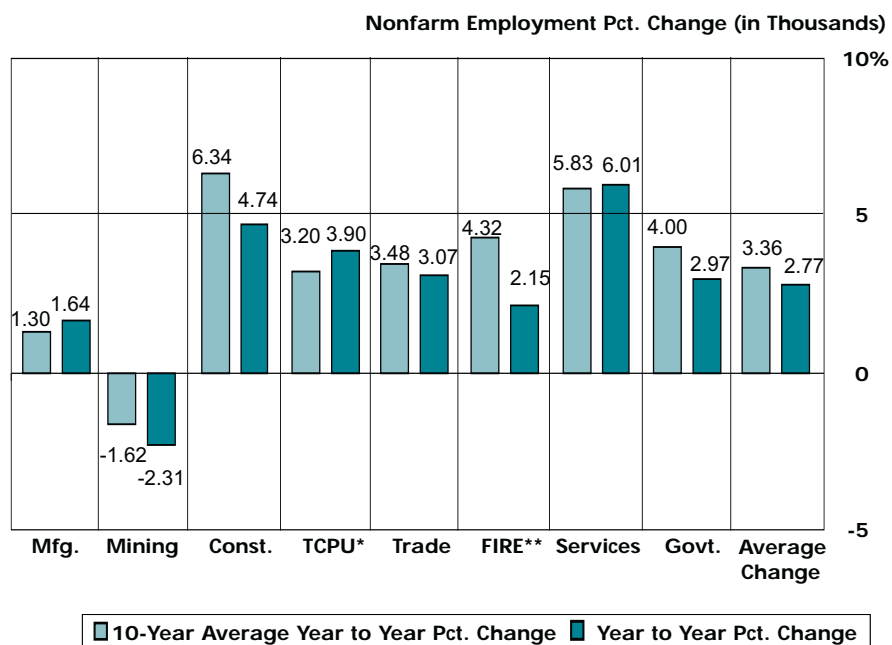
* Transportation, Communications, and Public Utilities

** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Figure 6

Over-the-Year Percentage Change and 10-Year Over-the-Year Percentage Change in Arizona Major Industry Employment, 3rd Qtr. 2000



* Transportation, Communications, and Public Utilities

** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Source: Arizona Dept. of Economic Security, Research Administration, March 2001

Mexico. The second was the rising demand for computer and telecommunications equipment.

Increasing the expansion pace of manufacturing, the durable-goods sector added 5,100 new jobs. The strongest boost in this sector came from machinery with an addition of 4,700 net new jobs. (Communications, computer and other electronic equipment were the products manufactured in the machinery sector.) Falling behind machinery in the strength of recovery, the fabricated metals group rebounded with the rest of manufacturing, adding 400 net new jobs.. Aircraft and missiles had the slowest rate of recovery with an increase of 300 net new jobs. The strong demand for airliners assisted the expansion of employment. Besides airliners, the substantial demand for communications satellites also bolstered this sector. Aggregates manufacturing employment remained flat over the year.

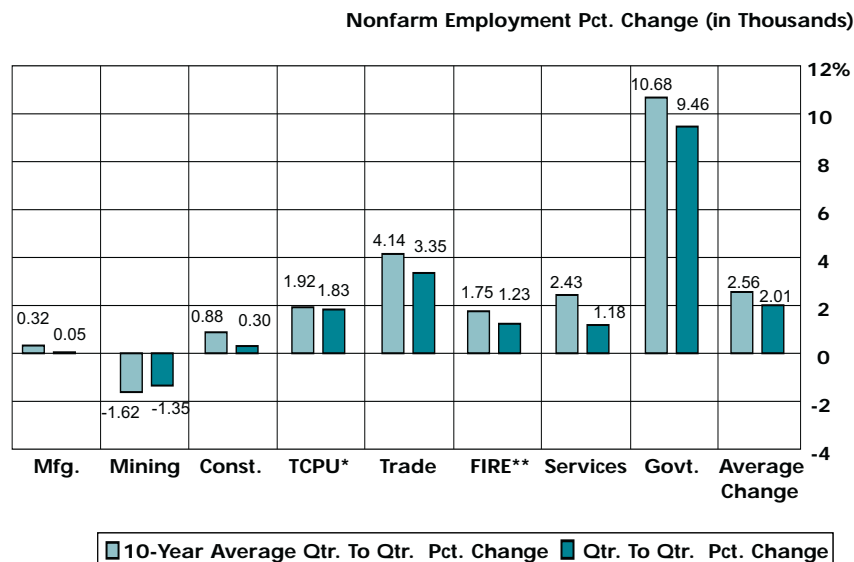
Low production of the primary metals, and lumber and wood products sectors restrained the expansion pace of durable-goods sectors. Also, the strengthened dollar contributed to weak export demand in 2000. The primary metals sector, which continued to suffer from weak export markets that started with the Asian economic crisis in 1997 and lingered in 2000, lost 100 jobs. Lumber and wood products also lost 100 jobs over the year.

Nondurable-goods sectors held back the pace of manufacturing industry expansion by an employment decrease of 1,200 jobs. The decline in nondurable goods was largely the result of firms moving outside the country in search of cheaper wages for this mostly labor-intensive industry sector. Printing and publishing followed the trend of employment losses with a decrease of 800 jobs. The advancement of computer technology since the early 1990s contributed to the decline in employment for printing and publishing. Food and kindred products were the exception to the declining trend with a gain of 500 jobs.

Unlike the trend set by the general

Figure 7

Quarterly and 10-Year Average Quarterly Percentage Change in Arizona Major Industry Employment, 4th Qtr. 2000

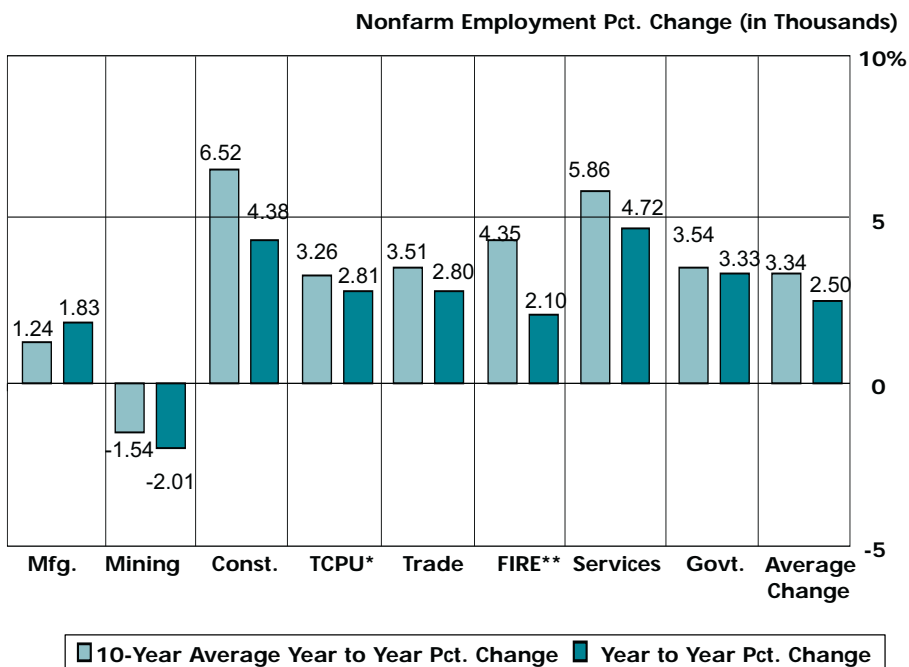


* Transportation, Communications, and Public Utilities
 ** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Figure 8

Over-the-Year Change and 10-Year Over-the-Year Change in Arizona Major Industry Employment, 4th Qtr. 2000



* Transportation, Communications, and Public Utilities
 ** Finance, Insurance, and Real Estate

Note: Quarterly averages of monthly data, not seasonally adjusted

Source: Arizona Dept. of Economic Security, Research Administration, March 2001

economy, government employment grew at a 1 percent rate, increasing by 12,300. Government employment expanded to meet the increased demand for public services such as education, fire, and police that are provided by state and local government. The state's swelling population was mostly responsible for increasing the demand for these public services. According to national forecast group WEFA, the expansion was constrained for state and local governments because of the policy of low taxes and the need to have a budget surplus to fund employee pensions. As a federal policy goal, the federal government has been reducing its employment levels.

Countering the general trend of slowing growth in most of the service-producing industries, the trade industry group had a slight increase in its pace of expansion with a gain of 14,600 jobs. The state's swelling population was sustaining the growth of the industry. Conversely, higher energy prices and rising interest rates were restraining the growth of trade by reducing consumer disposable income and the consumer's ability to buy. Wholesale trade added 1,900 jobs in 2000, having the same rate of growth as the previous year.

Bolstering the pace of expansion in trade, the retail trade sector was the largest gainer in the industry group with about 12,700 new jobs. General merchandise and apparel added 4,300 jobs, doubling its expansion pace over the last year. Bars and restaurants, the largest retail sector, had only a slight growth acceleration with an increase of 3,200 jobs. Following suit with a slight rise in the growth, automotive trade gained 2,200 jobs. Unlike the rest of retail, food stores remained unchanged due to the consolidations of supermarkets in the state.

As a consequence of the slowing national economy, the services industry group also expanded at a reduced rate in the year 2000. Even though it was the fastest growing part of the service-producing industries, with a job gain of 32,900, its average growth rate slowed over the year.

Following the trend of FIRE, the growth rate of construction slowed in comparison to recent years. Even though the expansion pace cooled, construction had the largest employment gain among the goods-producing industries with 7,000.

The braking of the services industry group was the consequence of the slower expansion rate of its largest sector, business services. In 1999, the average growth rate in business services was 3.5 percent, which dropped to an average 2.1 percent in 2000. Business services was the leader in this industry group with a gain of 18,600 net new jobs. The sector grew as it continued to provide firms with temporary staff as a cost-reduction measure. Increasing demand for computer and Internet services also bolstered this sector.

Health services added 1,700 net new jobs. Continued trends of an expanding and aging population have increased the demand for health-care services. On the other hand, consolidations resulting from mergers and acquisitions have restrained job growth.

Hotels and other lodging services showed no growth over the four quarters. The lack of change was the result of three factors — more stable staffing, the slowing economy, and a lack of snow. The industry was undergoing a change in the makeup of the workforce from a seasonal, temporary staff to a full time, permanent one. The result was more stability and less turnover. Second, the slowing national economy reduced the demand for its services. Third, the sparse snowfall in the beginning

months of 2000 in the northern Arizona mountains deterred skiers.

The industry group of transportation, communications, and public utilities (TCPU) slowed with the national economy. TCPU gained 3,000 net new jobs over the year. The transportation sector — which includes airlines, trucking, and railroads — gained 2,600 net new jobs. In comparison to the previous year, rising fuel costs squeezed its growth. Communications and public utilities added 500 net new jobs, growing at about a third the rate of transportation. Building the infrastructure of the digital world continued to contribute to the growth of communications. And for public utilities in the process of deregulation, electric power generating plants were constricted in the state by private, non-regulated firms.

Finance, insurance and real estate (FIRE) was the slowest growing major industry division of the service-producing industries, with an increase of 3,000 net new jobs. FIRE experienced mixed results for several reasons. On the up side, the state's economic and population growth was increasing the demand for products and services provided by FIRE. On the downside, three factors were at play. First, mergers and acquisitions have gradually eliminated jobs. Second, cooling stock markets decreased the demand for financial services. Third, higher interest rates and energy prices hindered growth by reducing disposable income.

Following the trend of FIRE, the growth rate of construction slowed in comparison to recent years. Even though the expansion pace cooled, construction had the largest employment gain among the goods-producing industries with 7,000. Rising interest rates were the strongest contributing factor to retarding the growth rate in construction. The strong demand of this industry group helped to bolster the weakened sectors of manufactured durable goods that included aggregates, lumber products, and metals.

Mining was the weakest industry in
(continued on back page)

Table 1

Arizona Quarterly Nonfarm Employment Data and Annual Average, 2000⁽¹⁾

(in Thousands)					
	00/1	00/2	00/3	00/4	Annual Average
Civilian Labor Force	2,308.0	2,326.5	2,360.5	2,392.9	2347.0
Quarterly Change	-2.4%	0.8%	1.5%	1.4%	0.3%
Annual Change	-0.4%	-1.7%	-1.1%	1.1%	-0.5%
Total Employment	2,223.2	2,235.1	2,256.3	2,308.5	2255.8
Quarterly Change	-2.0%	0.5%	1.0%	2.3%	0.5%
Annual Change	-0.1%	-1.1%	-0.5%	1.8%	0.0%
Total Nonfarm Payroll Employment	2,214.7	2,243.8	2,235.2	2,298.4	2248.0
Quarterly Change	-0.3%	1.3%	-0.4%	2.8%	0.9%
Annual Change	4.4%	4.0%	3.9%	3.4%	3.9%
Manufacturing	212.1	214.0	216.7	216.8	214.9
Quarterly Change	-0.4%	0.9%	1.3%	0.0%	0.5%
Annual Change	1.3%	1.3%	1.6%	1.8v	1.5%
Mining and Quarrying	9.7	9.8	9.9	9.7	9.8
Quarterly Change	-2.7%	1.4%	0.7%	-1.4%	-0.5%
Annual Change	-22.9%	-23.6%	-2.3%	-2.0%	-12.7%
Construction	155.0	161.0	165.7	166.2	162.0
Quarterly Change	-2.6%	3.9%	2.9%	0.3%	1.1%
Annual Change	4.9%	4.7%	4.7%	4.4%	4.7%
Transportation, Communications, and Public Utilities	106.9	107.7	109.1	111.1	108.7
Quarterly Change	-1.1%	0.7%	1.4%	1.8%	0.7%
Annual Change	6.4%	4.3%	3.9%	2.8%	4.3%
Finance, Insurance, & Real Estate	142.4	142.5	143.8	145.6	143.6
Quarterly Change	-0.1%	0.1%	0.9%	1.2%	0.5%
Annual Change	4.7%	2.5%	2.2%	2.1%	2.9%
Trade	521.9	522.6	520.3	537.7	525.6
Quarterly Change	-0.2%	0.1%	-0.4%	3.4%	0.7%
Annual Change	3.9%	2.8%	3.1%	2.8%	3.1%
Services and Miscellaneous	697.8	718.3	721.5	730.0	716.9
Quarterly Change	0.1%	2.9%	0.4%	1.2%	1.2%
Annual Change	6.2%	6.2%	6.0%	4.7%	5.8%
Government	369.0	368.0	348.3	381.3	366.6
Quarterly Change	0.0%	-0.3%	-5.3%	9.5%	1.0%
Annual Change	3.4%	4.4%	3.0%	3.3%	3.5%

Notes: 1) Detailed industry data may not add up exactly due to averaging
See Table 3 for Source

Table 2

Phoenix-Mesa Metropolitan Area Quarterly Nonfarm Employment Data and Annual Average, 2000^{(1)(2)(a)}

(in Thousands)

	00/1	00/2	00/3	00/4	Annual Average
Civilian Labor Force	1,538.1	1,546.7	1,568.9	1,598.0	1562.9
Quarterly Change	-2.3%	0.6%	1.4%	1.9%	0.4%
Annual Change	-0.8%	-1.7%	-1.1%	1.5%	-0.5%
Total Employment	1,495.5	1,506.0	1,524.0	1,557.9	1520.9
Quarterly Change	-2.1%	0.7%	1.2%	2.2%	0.5%
Annual Change	-0.7%	-1.2%	-0.7%	2.0%	-0.2%
Total Nonfarm Payroll Employment	1,554.7	1,577.8	1,575.1	1,621.2	1582.2
Quarterly Change	-0.6%	1.5%	-0.2%	2.9%	0.9%
Annual Change	3.8%	3.8%	3.7%	3.7%	3.8%
Manufacturing	163.8	164.5	166.4	166.4	165.3
Quarterly Change	0.0%	0.5%	1.1%	0.0%	0.4%
Annual Change	-0.6%	-0.2%	0.9%	1.6%	0.4%
Mining and Quarrying	2.5	2.5	2.6	2.6	2.5
Quarterly Change	-8.6%	2.7%	1.3%	1.3%	-0.8%
Annual Change	-52.6%	-53.4%	-10.5%	-3.7%	-30.0%
Construction	114.1	118.7	121.9	122.4	119.2
Quarterly Change	-2.4%	4.0%	2.7%	0.4%	1.2%
Annual Change	5.0%	5.0%	5.0%	4.7%	4.9%
Transportation, Communications and Public Utilities,	82.8	83.2	84.4	86.1	84.1
Quarterly Change	-0.8%	0.6%	1.4%	2.0%	0.8%
Annual Change	7.9%	5.3%	4.5%	3.2%	5.3%
Finance, Insurance, & Real Estate	118.9	120.0	121.2	122.5	120.7
Quarterly Change	-0.5%	1.0%	0.9%	1.1%	0.6%
Annual Change	2.7%	2.3%	2.3%	2.5%	2.4%
Trade	371.1	372.5	370.3	383.0	374.2
Quarterly Change	-0.2%	0.4%	-0.6%	3.4%	0.8%
Annual Change	3.5%	2.9%	2.9%	3.0%	3.1%
Services and Miscellaneous	504.3	520.7	523.0	530.8	519.7
Quarterly Change	-0.5%	3.3%	0.4%	1.5%	1.2%
Annual Change	5.4%	6.2%	5.8%	4.8%	5.5%
Government	197.4	195.6	185.4	207.4	196.5
Quarterly Change	-0.7%	-0.9%	-5.2%	11.9%	1.3%
Annual Change	3.9%	4.3%	2.5%	4.3%	3.7%

Notes: 1) Detailed industry data may not add up exactly due to averaging.

2) The introduction of Pinal County into the Phoenix-Mesa Metropolitan Area has created an inconsistency in the mining employment data beginning in 1990.

a) The Phoenix-Mesa Metropolitan Area consists of Maricopa and Pinal counties.

See Table 3 for Source

Table 3

Tucson Metropolitan Area Quarterly Nonfarm Employment Data and Annual Average, 2000^{(1)(b)}

(in Thousands)

	00/1	00/2	00/3	00/4	Annual Average
Civilian Labor Force	384.2	381.6	381.4	388.3	383.9
Quarterly Change	-1.7%	-0.7%	-0.1%	1.8%	-0.1%
Annual Change	1.9%	-0.9%	-1.3%	-0.6%	-0.2%
Total Employment	372.3	371.0	370.4	378.1	372.9
Quarterly Change	-1.2%	-0.3%	-0.2%	2.1%	0.1%
Annual Change	1.5%	-1.0%	-0.5%	0.3%	0.1%
Total Nonfarm Payroll Employment	349.3	350.8	345.0	355.3	350.1
Quarterly Change	0.4%	0.4%	-1.7%	3.0%	0.5%
Annual Change	6.1%	4.2%	4.0%	2.1%	4.1%
Manufacturing	32.4	33.0	33.4	33.6	33.1
Quarterly Change	-0.4%	2.0%	1.2%	0.7%	0.9%
Annual Change	13.3%	10.1%	6.0%	3.5%	8.2%
Mining and Quarrying	1.9	1.9	1.9	1.9	1.9
Quarterly Change	5.6%	0.0%	0.0%	0.0%	1.4%
Annual Change	-8.1%	-5.0%	1.8%	5.6%	-1.4%
Construction	21.7	21.7	22.0	21.8	21.8
Quarterly Change	-3.0%	0.2%	1.5%	-1.1%	-0.6%
Annual Change	7.1%	1.4%	-0.2%	-2.4%	1.5%
Transportation, Communications, and Public Utilities	11.8	11.9	12.0	12.1	12.0
Quarterly Change	-2.7%	0.3%	1.4%	0.6%	-0.1%
Annual Change	1.4%	-0.3%	0.0%	-0.5%	0.2%
Finance, Insurance, & Real Estate	14.3	13.6	13.7	13.9	13.9
Quarterly Change	-1.8%	-4.9%	1.0%	1.2%	-1.1%
Annual Change	13.5%	0.5%	-2.1%	-4.6%	1.8%
Trade	72.3	72.4	71.1	73.9	72.4
Quarterly Change	-1.2%	0.1%	-1.8%	3.9%	0.3%
Annual Change	4.2%	2.5%	1.6%	1.0%	2.3%
Services and Miscellaneous	118.3	118.8	118.6	119.4	118.8
Quarterly Change	2.4%	0.4%	-0.1%	0.6%	0.8%
Annual Change	7.3%	4.7%	5.6%	3.4%	5.3%
Government	76.7	77.6	72.2	78.6	76.3
Quarterly Change	0.9%	1.2%	-7.0%	8.9%	1.0%
Annual Change	3.0%	5.0%	6.2%	3.5%	4.4%

Notes: 1) Detailed industry data may not add up exactly due to averaging.

b) Tucson Metropolitan Area includes all of Pima County.

Source: Arizona Department of Economic Security, Research Administration, and U.S. Bureau of Labor Statistics, March 2001

State Jobless Rate Hit 30-Year Low in 2000

(continued from page 20)

terms of the rate of employment growth. Employment losses continued at a 0.5 percent rate for an average over-the-quarter decline of about 50 jobs. Sinking at an even faster rate was copper mining with an average per quarter loss of 100 jobs. Mining losses have been the result of firms moving outside of the country in search of sites with lower extraction costs.

Overall, the year 2000 was good economically for the state of Arizona for the following reasons. First, the state's unemployment rate decreased. Second, employment growth continued to be strong, although at a slower pace. Third, manufacturing industry growth rebounded, while the construction industry continued to gain jobs. Fourth, service-producing industries were pulled along by the state's strong population growth.

Notes:

1. The Standard Industrial Classification (SIC) system is the statistical classification standard underlying all establishment-based federal economic data. The structure of the SIC system makes it possible to tabulate, analyze, and publish employment data on four levels, according to the amount of industry detail considered most appropriate: The four levels are: division (one digit), major group (two digit), industry group (three digit), and industry code (four digit.)
2. From time to time, business establishments change location, ownership, or industrial activity. When this occurs, previously assigned Standard Industrial Classification (SIC) codes must be updated. Code changes fall into one of three categories -- "non-economic," "economic," and "changes from unclassified." Non-economic code changes are due to a revision of the coding structure, to correct codes that were incorrectly assigned, or a gradual shift (taking longer than 30 days) in activities of the establishment reporting units. Economic code changes are due to a change in industrial activity, ownership, or location that occurs in a period of less than 30 days. Changes from unclassified are required when a reporting unit that was assigned an "unclassified" code is assigned a specific industry or country code.

—Jack York,
DES, Research Administration
Economist



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